

CLAIMS

**WHAT IS CLAIMED IS:**

1. A genetically engineered mammalian cell that has been  
5 mutated by a process comprising the insertion of a recombinantly  
manipulated polynucleotide sequence into a gene in said  
genetically engineered mammalian cell wherein said gene is  
identifiable as corresponding to at least one of SEQ ID NOS: 1-  
891.

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2. The genetically engineered mammalian cell of Claim 1,  
wherein said cell is murine.

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3. A cell according to Claim 2, wherein said cell is an  
embryonic stem cell.

4. The genetically engineered mammalian cell of Claim 1,  
wherein said polynucleotide sequence is present on a viral  
vector.

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5. A cell according to Claim 4, wherein said viral vector  
is a retroviral vector.

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6. A cell according to Claim 4, wherein said viral vector  
additionally comprises regions of targeting DNA that facilitate  
gene targeting by homologous recombination.

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7. An isolated murine embryonic stem cell line comprising  
an engineered retroviral gene trap vector in at least one gene  
comprising a polynucleotide sequence first disclosed in one of  
SEQ ID NOS: 1-891.